

# Taller de validación del diagnóstico de la Caoba (*Swietenia macrophylla* King) en Belize



31 de agosto de 1999

Belmopan Convention Hotel, Bemopan Belize

Diagnóstico de la caoba  
(*Swietenia macrophylla* King)  
en Mesoamérica

## **Validación-Belize**

**Centro Científico Tropical**

**31 de agosto 1999**

Belmopán Convention Hotel  
Belmopán, Belize

**PROARCA/CAPAS**

## **ACERCA DE ESTA PUBLICACIÓN**

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**National Workshop Mahogany, *Swietenia macrophylla* King en Belice**

PROARCAS, CCT; Belize, 31 August de 1999

Belmopan Convention Hotel, Belmopan Belize

**Coordinators:**

**Julio C. Calvo (CCT) and Oscar Rosado (CONSULTANT)**

**AGENDA**

8:30 – 9:00 a.m.	Registration
9:00 – 9:15 a.m..	Objectives and expectations of the Study on Mahogany in Mesoamerica – Vicente Watson, CCT
9:15 – 9:45 a.m.	The conservation, Protection and Management of Mahogany in Belize – Oswaldo Sabido, Acting Chief Forest Officer
9:45 – 10:15 a.m.	Coffee Break
10:15 – 10:45 a.m.	The Commercialization and Harvesting of Mahogany in Belize – Dr. Gilly Canton, Belize Timber Limited
10:45 – 12:00 noon	Presentation an Discussion of the Draft Belize Report – Oscar Rosado, Forestry Consultant
12:00 1:30 p.m.	Lunch
1:30 – 3:00 p.m.	Group Works <ul style="list-style-type: none"> <li>a) Situation with the Industry and Market</li> <li>b) Management, Conservation and Protection of Mahogany</li> </ul>
3:00 – 3:30 p.m.	Break
3:30 – 4:30 p.m.	Plenary – Report of the Groups
4:30 – 5:00 p.m.	Closing

**Report on the Mahogany Workshop held on August 31, 1999  
At the Belmopan Convention Hotel, Belmopan Belize**

Timely invitations were sent out to 20 participants along with a copy of the draft report on the Situation with Mahogany in Belize. As required, the list of invited participants included three from Government's forestry and conservation sector; three from private forest industry; three from relevant NGO's; and three from academics. The others came from the list of some of the persons interviewed during the study and finally two from the Belize River Valley Community for their unique contribution in promoting artificial regeneration of Mahogany.

An agenda was prepared and given out to the participants along with an English translation of an Introduction and Objectives of the Study paper supplied by CCT. The Workshop was scheduled to begin at 9:00 a.m. but was unable to get on the way, due to participants being very slow in showing up. After an hour of waiting, the Workshop started with only eight participants including the two presenters.

After a few welcoming words by this writer (the consultant), Mr. Watson (CCT) asked participants to identify themselves and whom they represent. Mr. Watson continued by explaining the origin and objectives of the study covered in the introductory paper already referred to.

### Mr. Oswaldo Sabido's Presentation

Mr. Oswaldo Sabido was the next to speak as the first presenter who had been requested to speak on the Conservation, Protection and Management of Mahogany in Belize. He started by giving a history of wood cutting in Belize. Logwood started in 1700 after the buccaneering. Mahogany from 1638-1900 was the forest product at the time, the economy being timber dependency, which required small labor, small infrastructure by using the rivers for extraction and transportation. In 1774, the largest recorded mahogany tree was felled measuring 3.65 meters in diameter. In the 1770 Mahogany was the major export which was used for boat building and furniture. This was when the Cabinet trade in the UK took off.

Mahogany followed the system of logwood in 1655 by claims for works. These were lands 1000 paces on each side of a point on a riverbank into the divide of the next river. This was followed by land grants on a two-step process. An identifiable point along a navigable was chosen. The grant was three miles wide and eight miles inland. Rivers were used for floating the logs. After exploiting the land, the land was sold and buyers obtained large parcels becoming estates.

Mahogany harvesting and exports were difficult to obtain for several reasons. Different units were used and different conversions. There were a lot of waste of many kinds, a large volume was left on the stumps due to the method of cutting, logs were abandoned in the forest and in the rivers and flooding caused high losses. Internal consumption was not fully recorded and there was re-export of logs. A rough estimate for 1800 to 1950 is 1.5 billion board feet (123 million cubic feet). Mahogany supported a boom and bust the economy, low demand – high demand. A graphical presentation was given showing production in 1938 to 1993 in cubic feet and 1801 to 1993 in board feet.

Mahogany today has declined to a stocking of 0.5 to 0.25 trees per hectare when it had been 1.2 to 1.5 trees per hectare on a general scale and up to 2.5 trees per hectare in 1920 in the Belize Estate and Produce Lands.

Forest Management has been mahogany management which was selective felling; (1) the best trees a highly selective process; (2) Trees too large remained as seed trees; (3) 30-40 years cutting cycle. A simple effective management system was applied.

Mahogany export was the export of logs. In 1933 the first sawmill was introduced by BEC. In 1967 there were 30 sawmills, by 1980 45 mills and remains the same now. With the recent immigration taking place and the use of power saws has resulted in over-cutting of the large trees that had remained.

Some additional statistics were given as follows:

1922-1939	Forest products was 80% of domestic exports
1940	Forest products was 45% of domestic exports
1950	Forest products was 25 to 30% of domestic exports
1963	Forest products was 15% of domestic exports

1950-1980	Mahogany was 30-50% of total timber production
After 1980	Mahogany was 20% of total timber production
Now	Mahogany almost negligible.

The diameter cuttings limits for Mahogany in 1900 was 106 cm which reduced to 86, 72, 64 and 58 cm and now from 1992 onwards Mahogany as small as 20 cm in diameter is being cut. There has been a decline in cutting cycles from 45 to 10 years; though a 40-year cutting cycle have been reinstated in three forest reserves.

#### Conservation of mahogany

In 1886, the Hooper Report recommended the formation of a Forest Department. This was again reiterated in the Hummell Report 1922. A Forest trust was initiated in 1923 replaced by a Forest Department in 1935.

The 1922 Hummell Report found few regeneration of Mahogany and stand improvement operations began treating mahogany seedlings by cutting away vines and girdling undesirable trees. Seedling operations involved in 1929 treating 100,000 seedlings by 1942 a million seedlings had been treated using cheap labour.

Again, Mahogany timber production was very low in 1997 Mahogany 238221.5 cu ft, Cedar 24928.0 cu ft, in 1998 Mahogany 235229.0 cu ft.

Cedar production only 10% of volume production 1997, 12% in 1999, 11% in 1998. On the matter of plantations, Mr. Sabido's view as stated is that this should be in the hands of the private sector, put in the best soils and need to guard against hurricanes. Incentives could be provided. In agro-forestry, one is only concerned in small acreage when plantations are large scales.

## **The Commercialization and Harvesting of Mahogany in Belize**

### **Dr. Gilbert H. Canton-Belize Timber Ltd.**

The past few years in our industry has been especially trying for legitimate players. We have witnessed the demise of Mahogany and by extension the timber industry as we knew and played in it, for Mahogany was the industry. Many of us saw it coming but did not fully understand the rapid pace of events that would place Mahogany beyond our reach and leave the industry struggling to substitute relatively unknown species in an unforgiving export market. There are many lessons to learn from Mahogany as we try to reset our industry on other species and value-added products. Perhaps if we are wise enough we can utilize our Mahogany experience and at least ameliorate and possibly avoid similar disasters in the future. This caution is extended to the present situation developing with Pine and other species that become important as their commercialization increases. Returning to Mahogany, we are still hopeful that with effective restoration schemes we will be able to reestablish Mahogany to its abundant levels in the forests we manage to retain as productive forests.

Mahogany was the backbone of the economy through most of our country's history. Now its contribution to the economy is less than one percent. What happened? Perhaps the biggest contributor to Mahogany's demise is its value. Over the years, too much reliance was placed on this lucrative commodity and diversification and development of other species was relegated to minimal importance. As Mahogany stocks diminished with exploitation under the selective cutting, minimum girth regime, the rules were changed to allow continued cutting. One can review the reduction in girth limits and the relaxation of controls on clear felling over the years to corroborate this. The trend to change the rules to accommodate the need for harvestable timber along with ever-increasing illegal harvesting activities added to the depletion of Mahogany stocks. Regeneration could not keep pace with exploitation.

I believe that it was Denis Alder in a report prepared for the Forest Planning and Management Project in 1993 who said that Mahogany was being over-cut three times the sustainable level and that the sustainable level was around 213,000 cubic feet. My reaction to that report was "I give you my watch and you tell me the time". You see everyone knew that this was the situation. In fact I felt that Mr. Alder's report was conservative.

One only has to look around to readily see what is the true situation. This visible evidence came afterwards by statistical research and analysis. Where are the logs coming from? The South! What does this mean? There are no logs in the North. Visit the sawmills in the north that depend on logs harvested from that area and observe the logs in the log-yards or those being transported on the highways. Matchsticks. All undersized trees. Talk to private landowners in the area and listen to the incessant vigil they have to be on to protect their lands from timber rape of whatever trees they have. No matter the size. You see all I need to cut trees is a permit in the vicinity and it is easy to get lost in the bush.



What about the sawmills who buy the undersized trees. Oh that is easy, the logs are stamped.

Talk to the major investors in the industry and listen to the universal complaint of trying to operate a business with ever decreasing availability of logs. The present throughput of timber in of solid and substantial investments is at less than fifty percent and in some cases at twenty percent. There are no logs and where there are logs the larger legitimate operator's hands are tied and the small operator and illegitimate faction seem to have priority on the resource. Where are we headed?

Recently, there has been a proliferation of chain sawmills in the country. Why is this so? The first reason is that as logs become less accessible by conventional harvesting means, chain saw mills are an effective way to convert those logs, which cannot be logged and transported conventionally, to lumber which is more easily hand carried from the bush.

Of course the second reason is clandestine in nature. Can you imagine the opportunities for illegal and destructive forestry practices afforded by the use of chain saw mills. I must stress that illegal logging through chain saw mills and the cutting of undersized trees is not only destructive to our timber resources but also severely undermines the viability of legitimate operators through the unfair competition of cheap lumber from these sources and the bypassing of established manufacturing facilities. Lumber from chainsaw mills are a very inefficient recovery of valuable timber.

The South is now under pressure. It is only a matter of time before it too is depleted to the levels of the north if some decisive action is not taken to arrest the problem and take corrective measures.

Some of us in the conservation field thump our chests and say, well we have done our share, we have used our influence (international money and big stick diplomacy) to place over forty percent of the country in National Parks and other types of protected areas. We are saving the Mahogany. While this may be true to a certain extent it is in my opinion perhaps somewhat misplaced as that same influence and effort could have been used in a more comprehensive manner to assist in addressing the problems in the industry and thus contribute to the economic as well as conservation development of the country.

In this vein, we are being pushed into certification processes that we are told is necessary if we are to market our Mahogany and other species internationally. Somehow I don't feel ownership of the process. It is something that I am told you must do. However all our experiences has been negative in this regard. First of all most of us are not in a land and timber tenure position to be able to be certified. Secondly, the costs of certification are high and no premium exists to recover this cost. I understand that perhaps if you are sponsored by big conservation businesses these businesses can open affiliate doors for you. However, most players in the industry are not in such a position.

Incidentally, the adoption of sustainable logging practices as develop under the Forest Management and Planning Project has indirectly contributed to less Mahogany in the market. The program by its design has cut annual timber availability to one fortieth of the traditional level and has put in place silvicultural measures that promote regeneration by leaving a certain percentage of trees standing no matter if they can be commercially cut.

We embrace the concept of sustainable logging but emphasize that this process is in its infancy. There is much to learn, as we progress and modifications will have to be made. We also stress that the industry must retain ownership of the process and the conservation trend not overshadow industry and development needs. This situation is occurring and unfortunately it is not a level playing field. However it is not until the vital role that the industry plays in the overall health of our forests is genuinely recognized and accepted that we will take our rightful place and true sustainability achieved. I challenge all to work towards this harmony.

The demand for Mahogany is ever present. It is our duty to make sure that this incessant and insatiable demand does not continue to promote unsustainable harvesting and perhaps unrecoverable depletion of this valuable resource. We must put in place effective programs to conserve, restore and utilize our Mahogany.

We must completely stop the cutting of undersized trees.

We must eliminate the use of chain sawmills.

We must rationalize the resource base on not only ecologically but also economically sound basis and fairly allocate this resource to committed industry players.

We must stop fragmenting the timber into numerous small license areas and consolidate these areas into larger tracts on which management programs can be developed.

We must tie our Mahogany exports to in-country processing capabilities and export opportunities that give us the best returns.

We must be very careful about green certification parameters handed down to us that preclude economic viability and take control of this process, as it is our resource.

We must find ways of working together for the benefit of the forestry sector and realize this means compromise.

Finally, we must increase the awareness of this value of our forests as a natural asset and secure commitment to the conservation and enhancement of this asset.

This is just a beginning. There are many more things that we can do.

Thank You.

### **Mr. Fairweather Presentation, from the Belize River Valley Community**

The last speaker was Mr. Fairweather from the Belize River Valley Community who has spear headed the planting of Mahogany in the Sibun area. He mentioned that native participation in this area is needed, bringing in small farmers with small areas.

Mr. Fairweather said he started planting Mahogany in 1985, and now he has 300 acres planted or 60,000 trees growing with height of 5 ft to 22 ft and by the end of 1999 he should have 90,000 trees at a spacing of 10 x 30 feet. He is investing whatever he can from his private surveying income and he has given away Mahogany seedlings to be planted in schoolyards. This is a good example for other landowners to follow.

#### **General Discussions:**

Discussions agreed that there are illegal exports of lumber happening with Europe reporting imports from Belize larger than accounted for in Belize. It was mentioned that exports should be on a quota level and the industry needs to integrate and have joint ventures.

From Mr. Canto representing the Belize College of Agriculture, it became known that he heads the Agro-forestry course at the school. Through the Ministry of Agriculture the Belize College of Agriculture is putting tree nurseries in various districts and they are introducing planting Mahogany in abandoned pastureland.

Unfortunately, the two presenters had to leave and because of time we went straight into group questions. After lunch only two groups had been planned. Group I – Industry and Market and Group II – Conservation, Protection and Management. The presentation of the Report was bypassed but all participants had a copy of the draft but there were at least two comments made about the report which were favorable.

It was decided because of the reduced number of participants remaining one group should deal with the questions planned.

## I. Industry and Market Group

***1. The major part of mahogany is exported in the form of sawn lumber because there are more incentives for this than for other forms. Which are these incentives. And why does this system continue? Can this scenario be changed? What do you suggest?***

Cash flow problem exists – proper arrangements for exporting is needed such as credit financing and markets.

***2. Can we have an estimation of the proportion of illegal and undersize logging?***

R/ Large percent, which cannot be classified, is illegal. There is a chainsaw problem brought in by immigrants who have been issued permits to cut Mahogany. Those trees left behind in the system have now been removed, because with the chainsaw, sawing takes place on the spot and the lumber transported manually.

R/ Mr. Meerman.

Personally I estimate that the illegal harvest of Mahogany is larger than the legal harvest. Most of this I assume is for the domestic market.

***3. What type of forest product are being produced from Mahogany for local and export market?***

R/ Lumber, plywood, furniture, doors, molding, boats, drawers, cabinets, picture frames, carving, tourist trinkets.

***4. From the legal, institutional, and political point of view, which are the critical aspects needing improvement?***

Too political, there is no creativity for integrated industry, no direction. Institutions looking to better certain areas (NGO's), e.g. Cottage Industries, small wood items with value added. Institutions are playing a role in promoting Mahogany lumber.

Suggestions:

1. Leave industry and the private sector to continue joint ventures.
2. Forestry could identify these possibilities in relation to Mahogany.
3. There is a possibility for a project – with the Belize River Valley Community.

## II. Conservation, Protection and Management

### 1. Revising the limits of the area of the natural occurrence of mahogany.

R/ Use the information available.

R/ Meerman.

Mahogany is a lime-loving species, rare or even absent on acidic soils. Also I find M mostly on relatively wet soils. Even in "swamp" forests. Typically, where M and Cedar occur together, you will find M in the wetter valleys and Cedar on limestone hills or hilltops. This ecological separation is not absolute but probably statistically significant.

### 2. *In which areas of the country is the species most threatened and why? How can we improved the situation?*

R/ In the north of the country due to clearing land for sugar cane and other clearings.

R/ Mr. Meerman.

I do not believe M is threatened as a species. It is definitely threatened as a resource. As such it is threatened anywhere where it is accessible. EG all lowlands, which also is it's preferred habitat.

Some suggestions are: a) Implement a country wide managing system b) Actually prosecute illegal logging.

### 3. *What does the group think about including Mahogany and Read Cedar in Appendices III or Appendices II of CITIES? What would be the national policy in regards to this and why? Which appendix do you suggest this species should be and why?*

R/ The group considers that Appendix III is enough since it requires a certificate of origin.

R/ Mr. Meerman.

Making export of M illegal could be counter productive. Since M is a valuable resource it can actually act as an incentive to protect it and the forest in which it grows. Total protection destroys the value and therefore the incentive for protection. I feel CITES III, again as not to "illegalize" the species but to allow for local conservation measures and monitoring.

### 4. *In general terms how much of the total production area has being certified. How many operations?*

There are a total of 45 licenses,

- 1 certified for Mahogany: Programme for Belize
- 1 certified for Pine: Pine Lumber Company

Programme for Belize – 59401.2 acres.

**5. *There has being several indications that red Cedar is more threatened than Mahogany. Is this true, what can be done to reduce this problem?***

R/ Same as Mahogany.

R/ Mr. Meerman. .

Interesting question. See also my ecological assessment of the two species. Cedar is more a weed-species than Mahogany. Shoots up anywhere in disturbed situations (on Limestone only), but most such trees produce very poor timber. Personally I believe that Cedar as a species is even less threatened than Mahogany but we might be looking at a phenomenon called "commercial extinction". All the good and straight trees harvested away and only the crooked specimens in pastures etc. left. Sawmill figures should give some indication. Look at the annual production of Cedar versus Mahogany at sawmills.

**6. *How to control the overcut? The study suggests: reviewing the forest Policy Act and other laws for: licensing of sawmills, improve monitoring and compliance, stop illegal logging and underside cutting, stop fragmentation of logging areas by not renewing licenses, promoting logging only in large forest managing units.***

R/ Enforcement of laws; amendments necessary – incentives needed, encouragement needed; restrict harvesting of mahogany by increasing diameter size; encourage planting of mahogany. Tap into the Carbon Sequestration Program – Enforce law regarding land clearing near streams and rivers.

R/ Mr. Meerman.

- Management plans IMPLEMENTED for all forest reserves - Create restrictions/management regulations also for private lands - Create incentives for sustainable logging for private lands - 40 year rotational schemes - Active and actual prosecution of all defaulters and illegal loggers - Remove the power from all politicians to grant forest licenses.

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